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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/498,995	02/07/2000	Takafumi Watanabe	04284.0829	9593

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EXAMINER

KIM, JUNG W

ART UNIT PAPER NUMBER

2132

DATE MAILED: 03/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/498,995	Applicant(s) WATANABE, TAKAFUMI	
	Examiner Jung W Kim	Art Unit 2132	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 February 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 8-17 have been examined. Applicant in the amendment filed on February 10, 2005 has amended claims 8 and 14. Claims 1-7 were canceled in a previous amendment.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 28, 2005 has been entered.

Response to Arguments

3. The following is a response to the Remarks in the amendment filed on February 10, 2005 (hereinafter Remarks).

4. In reply to applicant's argument that *lijima* does not disclose "means for storing validity data indicating whether the security function is valid in a nonvolatile memory" (Remarks, pg. 9, 1st full paragraph-pg. 10, 1st paragraph), examiner respectfully disagrees. The assignment flag and FF flag in combination are disclosed by *lijima* for

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such a purpose: the function of the validity data as an indicator of the validity of a security function includes, inter alia, a check for DF assignment (col. 5:64-6:51; 7:1-25 and 32-51; 9:5-28), verifying data in a user area (11:28-12:29), and a verification step when the issuer of an IC card checks a memory of the card (col. 12:40-54). See also figure 10 and related text. Furthermore, applicant's argument is based on the conclusion that the "optional data" does not constitute "validity data indicating whether the security function is valid" (Remarks, pg. 7, 1st full paragraph); however, it is unclear what this conclusion is based on. The example indicated by applicant is an embodiment wherein optional data is disclosed as increment data starting from '00'; but this only defines the literal constraints of the hexadecimal FF flag, and does not establish any critical rational as to why the optional data is not validity data. Hence, as outlined below, applicant's claimed invention is rejected over the prior art of record.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 8 recites the limitation "the validity data". However, it is not clear if the validity data referred is the validity data included in the command message or the stored validity data indicating whether the security function is valid in a nonvolatile memory.

Claim Rejections - 35 USC § 102

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
9. Claims 8-11 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Iijima U.S. Patent No. 5,365,045 (hereinafter Iijima).
10. As per claim 8, Iijima discloses a portable electronic device with a security function, containing an application program, comprising:
 - a. means for storing validity data indicating whether the security function is valid in a nonvolatile memory (col. 5:56-6:18 and 58-62; 11:28-12:19; 12:40-13:3; figure 10 and related text);
 - b. first means for determining whether a command message received from outside of the device includes validity data for the security function (6:5-18; 7:1-10 and 32-41; 9:6-18; 9:63-10:6; 11:29-41; Figure 11 and related text);
 - c. second means for determining whether the validity data is stored in the nonvolatile memory (figure 10 and related text); and
 - d. first means for writing or rewriting data in the nonvolatile memory after receiving the command message when the first determining means determines that the command message does not include the validity data for the security

function and the second determining means determines the validity data is not stored in the nonvolatile memory (5:64-6:50, especially 6:19-50; 12:31-13:3).

The aforementioned cover the limitations of claim 8.

11. As per claim 9, the rejection of claim 8 under 35 U.S.C. 102(b) is incorporated herein. In addition, the card further comprises a first means for outputting a status indicating that the command message is not acceptable when the first determining means determines that the command message is not included in the data for the security function and the second determining means determines that the validity data is stored in the nonvolatile memory. Iijima, col. 6:15-18. The aforementioned cover the limitations of claim 9.

12. As per claim 10, the rejection of claim 8 under 35 U.S.C. 102(b) is incorporated herein. In addition, the card further comprises:

- a. a third means for determining whether verification of the data for the security function succeeded when the first determining means determines the command message is included in the data for the security function (col. 9:63-10:20); and
- b. second means for writing or rewriting data into the nonvolatile memory following the command message when the third determining means determines the verification was successful (10:30-11:27).

The aforementioned cover the limitations of claim 10.

13. As per claim 11, the rejection of claim 10 under 35 U.S.C. 102(b) is incorporated herein. In addition, the card further comprises a second means for outputting a status indicating that the command message is not acceptable when the third determining means determines the verification of the data for the security function was not successful. Iijima, col. 11:42-62. The aforementioned cover the limitations of claim 11.

14. As per claim 13, the rejection of claim 9 under 35 U.S.C. 102(b) is incorporated herein. In addition, the command message further comprises:

- a. a writing or rewriting command (col. 10:42-45); and
- b. encoded data that is written or rewritten into the nonvolatile memory after being decoded based on verification of the data (4:9-17).

The aforementioned cover the limitations of claim 13.

Claim Rejections - 35 USC § 103

15. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

16. Claims 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iijima in view of Schneier Applied Cryptography Chapter 2 "Protocol Building Blocks" and Chapter 24 "Example Implementations" (hereinafter Schneier).

17. As per claims 12 and 14, the rejections of claims 9, 10 and 13 under U.S.C. 102(b) are incorporated herein. Although, Iijima does not explicitly disclose additional spare data on the command message guaranteeing the validity of the data, information transferred to an IC card is typically secured and validated by cryptographic methods as taught by Schneier. Schneier, pg. 587, Section 24.13 'Smart Cards'. Furthermore, Schneier teaches several general protocols to verify data using digital signatures and hashes. Schneier, pgs. 31-44; MAC, one-way hash, digital signature. It would be obvious to one of ordinary skill in the art at the time the invention was made to secure the command data using digital signatures since doing so enables the receiver to validate the authorship of the received message. Schneier, pg. 35, 5 compelling reasons. The aforementioned cover the limitations of claims 12 and 14.

18. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iijima in view of Grimonprez et al. U.S. Patent No. 5,473,690 (hereinafter Grimonprez).

19. As per claim 15, the rejection of claim 9 under 35 U.S.C. 102(b) is incorporated herein. Although, Iijima does not expressly disclose storing a plurality of application programs wherein each program has an associated security program, IC cards are typically designed to hold more than one application securely. For example, Grimonprez discloses a secure method for loading a plurality of applications on to a microprocessor of an IC card wherein each application has a corresponding security program. See Grimonprez, Figure 3, 'Name of Application' and 'Password of

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Application'; Figures 8 and 9. It would be obvious to one of ordinary skill in the art at the time the invention was made for the IC card to store a plurality of security programs, each corresponding to an application program. One would be motivated to do so to establish a more secure access methodology since a compromise of the password of an application does not compromise access to other applications stored in the smart card as known to one of ordinary skill in the art and as taught by Grimonprez, *ibid*. The aforementioned cover the limitations of claim 15.

20. As per claim 16, the rejection of claim 13 under 35 U.S.C. 102(b) is incorporated herein. In addition, a plurality of security programs is separately validated in response to a prescribed command message for validation, and wherein each security program corresponds to an application program. Iijima, col. 4:4-8; 11:28-12:19; Grimonprez, figures 3, 8, and 9, and related text. It would be obvious to one of ordinary skill in the art at the time the invention was made for a plurality of security programs to be separately validated in response to a prescribed command message for validation, and wherein each security program corresponds to an application program in the device taught by Iijima to ensure the security of the user's data storage area by ensuring each of the plurality of applications associated with the user's data storage area. See Iijima, Figure 4, Reference No. 20b (user area allocates space for a plurality of data files); 11:28-12:19. The aforementioned cover the limitations of claim 16.

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21. As per claim 17, the rejection of claim 16 under 35 U.S.C. 103(a) is incorporated herein. In addition, at least one available format of the command message is separately defined, and wherein each format corresponds to an application program. Iijima, figures 11-17 and related text. The aforementioned cover the limitations of claim 17.

Conclusion

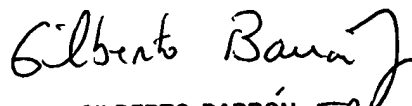
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jung W Kim whose telephone number is (571) 272-3804. The examiner can normally be reached on M-F 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on (571) 272-3799. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jung W Kim
Examiner
Art Unit 2132



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March 25, 2005